Date: Fri, 11 Nov 94 04:30:21 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #374
To: Ham-Ant

Ham-Ant Digest Fri, 11 Nov 94 Volume 94 : Issue 374

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Nov 1994 00:05:25 GMT
From: jerry@bashful.isi.com (Jerry Gardner x323)
Subject: (none)

In article <9411071629.AA13018@royac4.royac.iac.es>,
>
> Does anyone have an idea how to protect a beam from pigeons?

Perhaps there's a substance you can paint on the beam that would make it
too slippery for the pigeons to hang on?

Date: Tue, 8 Nov 94 17:05:00 -0500
From: art.harris@woodybbs.com (Art Harris)
Subject: BNC vs N vs UHF at VH

In article <CyGME2.Azs@srgenprp.sr.hp.com>,
Alan Bloom <alanb@hpnmarb.sr.hp.com> wrote:
>: So what did I learn from all of this? Well, nothing new really.
>: It reaffirmed the age-old caveat to stay away from UHF
>: connectors on VHF/UHF frequencies.
>
>Not sure I agree about the VHF part. The worst connector you could find
>lost only .3 dB at 450 MHz. I bet it wouldn't be more than .1 dB on the
>two meter band, which I think most hams would find acceptable. And
>good-quality connectors do better than that.

That 0.3 db at 450 MHz sounds very high to me. Where did that come from?
Assuming the the connectors are of reasonably good quality and are
assembled and soldered correctly, I would expect something like .01 db
loss at 450 MHz, and less at VHF.

The UHF connector will create a slight impedance bump at UHF, but where
is the mechanism for loss? Loss can only occur due to ohmic heating in
the metal or dialectric. If silver/teflon connectors are used these
losses are almost nil.

The main problem with PL-259 connectors is their susceptibility to
moisture if not weather proofed.

Art, N2AH

Date: 10 Nov 1994 21:35:32 GMT
From: levine@mc.com (Bob Levine)
Subject: Cushcraft HF Antennas R5 R7

Ive owned them both and still have an R7 on the roof.

They work well, never came down, characteristics never
changed during their lives. The R7 was bent at least
30-40 degrees during an 80mph windstorm and also once
caked with ice. Bounced right back.

I switch to it for mults when my beam is pointed the wrong
way during contests when I am runnning on a freq and see a
good packet mult spot.

The signal strength is 5-6 S-units below the level
heard on my A4S tribander at about the same height. (50')

Bob KD1GG

Bob Levine KD1GG 7J1AIS VK2GYN   formerly KA1JFP

Date: 10 Nov 1994 02:13:57 GMT
From: "Mike W. Kirkpatrick" <70404.2772@CompuServe.COM>
Subject: Getting UHF to work in a "HOLE"

I work at a hospital where my employees and myself carry portable
5 watt UHF radios to keep in touch with each other. These radios
worked really well, even better than the VHF ones used by our
Plant Operations department. The problem is that our support
center has been moved into the basement and we are basically
surrounded by lots of solid concrete and there is hardly any
range to speak of with the radios any longer. What can I do to
correct this?? I have heard mention before of installing "leaky
coax" or something like that before. Can anyone help me out??

Tx
Mike Kirkpatrick

Date: 11 Nov 1994 05:14:10 GMT
From: n0dh@comtch.iea.com (D.C. Henderson)
Subject: Have Huge Oak; Need Antenna Ideas

IBM Gary (ibmgary@aol.com) wrote:

: Need some hints....

: I live on a 80 x 150 lot in a restricted neighborhood.

: 100-foot oak tree is at rear corner of house, 10 feet from house.

: I use a Murch Ultimate Transmatch, for unbalanced antennas.

: A local arborist will climb the oak for $25 an hour and put up whatever I
: want. I'd like to operate 160-10.

: Any ideas out there?

: 73,
: Gary Brown - WA2ROV
: Cary, NC   TS-830S

Gary

Have the tree climber put a pully as close to the top of the oak as he can
get, along with rope through the pulley then you can pull up any number of
experimental antennas. For the winter just haul up 90' of wire as a
vertical, bury lots of radials and tune it with the tuner should work
like a champ on 160, 80 and 40 ..anybodys guess on higher bands.

Dave
N0DH

Date: Thu, 10 Nov 1994 04:45:21 GMT
From: bart@wb6hqk.ampr.org (Bart Rowlett)
Subject: How much range on 80m? 40m?

In article <3NOV199408304309@ewirb-wr>,
SODERMAN.WALTER <soderman@ewirb-wr> wrote:
>I realize that a dipole should be up 1/2 wave for optimum performance, but if I
>have an 80 meter dipole only 12 to 15 feet up, and no surrounding interfering
>structures, should I be able to get "acceptable" performance for a range of
>say, 200 miles? That's really all I need for my application.
>

It will most likely work fine for short skip, also known as Near Vertical
Incidence. The majority of the radiation will be orientated upward and
assuming the ground isn't extraordinarily conductive, the antenna will not
be particularly efficient but will most likely receive just fine. Beware
the feed impedance might be below 50 ohms but just about any antenna

tuner should handle it ok.

bart wb6hqk

bart@wb6hqk.ampr.org

Date: Thu, 10 Nov 1994 14:43:54 GMT
From: zlau@arrl.org (Zack Lau (KH6CP))
Subject: How much range on 80m? 40m?

Todd Little N9MWB (little@iamu.chi.dec.com) wrote:

: In article <3NOV199408304309@ewirb-wr>, soderman@ewirb-wr (SODERMAN.WALTER)
writes:
: |>I realize that a dipole should be up 1/2 wave for optimum performance, but if
I
: |>have an 80 meter dipole only 12 to 15 feet up, and no surrounding interfering
: |>structures, should I be able to get "acceptable" performance for a range of
: |>say, 200 miles? That's really all I need for my application.

: Perhaps even lower to the ground might be better. There have been several
: articles describing Near Vertical Incident Skywave (NVIS), that describe
: placing a wire antenna such as a dipole only a few feet above the ground
: and obtaining very good results for 40m and 80m communications out to
: around 400-600(?) miles as I recall. Perhaps someone that has a copy of
: one of the articles could post the particulars.

Such low antennas aren't terribly efficient. On the other hand, the
higher ground losses make them much more broadbanded :-).

For most people, you want to get your 80 meter antenna as high as
possible. For those who don't have height restrictions, I'd probably
go with 100 ft as a nice compromise for a single dipole. Much higher,
and you tend to get a "DX antenna" that doesn't do as well for short
skip as lower antennas.

I'd say your dipole is too low for serious low power (QRP) work,
but if you think signal levels are adequate, then they are.
--
Zack Lau KH6CP/1   2 way QRP WAS
                           8 States on 10 GHz
Internet: zlau@arrl.org   10 grids on 2304 MHz

Date: Tue, 8 Nov 94 17:05:00 -0500

From: art.harris@woodybbs.com (Art Harris)
Subject: If a half wave is good, i

@SUBJECT:If a half wave is good, is 3/2 wave bettter?
In <395p3f$117@masala.cc.uh.edu> David, KC5JRR wrote:

>OK, I put up a half wave dipole cut for 80M, fed with tuned ladder line.
>It's configured as a half-a**ed inverted vee, I guess, but it's only up
>about 22'. Works great, though--I've talked regularly to NY and Pa from
>Tx on 40M. I would like to raise the antenna height, and so I am planning
>where end supports will be, and at what height. I have a lot of room in
>which I can put up a much longer dipole, if it would enhance performance.

>Question 1: If I extend the length of each leg to 3/4 wave cut for
>80M, could I expect to gain anything strictly as a result of the greater
>length? What will happen to 40? Any implications for 160?

Your 80 meter dipole acts as "two half waves in phase" on 40 meters, and
if horizontal, would give about 2 db gain on 40 meters (broadside). If
you extended it so that each half of the dipole were 5/8 wave on 40
meters (90 feet per side), you would have a "double extended zepp" which
would give about 3 db gain on 40 meters (relative to a 1/2-wave dipole).
That is the optimum length on 40. If you go beyond that, the pattern
will begin to break up into multiple lobes.

Do you use this antenna on the higher bands (20 thru 10 meters)? If so
that 400 foot dipole would give some very strange patterns on the higher
bands, with most of the signal being directed off the ends rather than
broadside.

You might think that all that wire would do a super job on receive due
to "all that capture area." But it turns out that at a particular
frequency, capture area is proportional to gain.

I would stick with the 130 foot dipole, but try to get it up higher --
at least 35 to 40 feet in the air.

>Question 2: I really have no empirical method for checking this, but
>it's my impression that 40M performance is far better than 80M.

I suspect the reason is the 22' height. At 80 meters, that's only about
1/12 wavelength! Also, during daylight 80 meter signals suffer much
greater absorbtion in the D layer than 40 meter signals.

73
Art N2AH

Date: 9 Nov 1994 09:54:41 -0500
From: domonkos@access.digex.net (Andy Domonkos)
Subject: Isotron w/ QRP

In article <39lk39$bm6@News1.mcs.com>, John Fleming wrote:
> Got an Isotron-40, assembled Friday night. Small and
> easy to construct, one bolt too many, one nut too few..
>
> Rainy Saturday... Sunday, put up 10' mast in back yard..
> I know it's not high, but I want this for a portable QRP
> antenna..
>
> SWR about 1.5 - 1.9 in CW portion of band with no tuning.
> At least that's what my MFJ says...
>
> Tried to contact a couple of SS stations, no go, band full.
>
> Tried again Sun nite. No response after 20 mins of CQ.
> No response from about 10 replies.
>
> Tried again 2:30 AM Mon Morning. No one heard, no one
> responds.. Tried 7.030,.040,.110 . Well, w/QRP in the city,
> one day isn't a fair test.
>
> But if I don't make a contact this week, I'll be disappointed
> in the Isotron. Could usually grab somebody at least a few
> times a week w/ the GAP Vertical.
>

Although I've worked 30M QRP w/my Isoloop I wouldn't make a habit of it.
The effective ERP is probably in the milliwatt range, REAL QRP :-)

I use 20 - 50 watts with my Isoloop. I worked Australia on 20M, 539 RST,
with 50 watts out. Not bad for an antenna that shouldn't work, eh?

I may buy one of those fangled ISOTRONS after all. Or I'll try my Hustler
40M mobile antenna with a counterpoise in my attic.

QRZ'ed?

Andy N3LCW

Date: 10 Nov 1994 17:15:15 -0500
From: dbotkin@aol.com (D Botkin)
Subject: J-pole inside of a PVC tube

In article <39lu1gINNq8d@diable.upc.es>, KILIAN@eupvg.upc.es (Kilian
Ricou) writes:

8<   snip...

Two weeks ago I make a 2 meter J-pole wire antena.
It works better than my car antena but, I thought about protect it
from the rain. And then I bought a PVC tube and put inside the antena.

Anyone knows if this will afect the SWR or the gain of the antena ?

Thanks,

8< snip...

Yeah, you will probably have to re-tune it. I've found that putting a
J-pole in close proximity to even non-conductive things will alter its
resonant frequency.

I've also found out that using a 4:1 halfwave coax balun to feed it will
reduce this quite a bit, but it's tuff to tune the coax balun itself
without the aid of something like an MFJ 259, which I used. I've been
using one in PVC pipe for a year now on packet, though, and it's super.
Good luck!

73,
Dale

Date: Thu, 10 Nov 1994 23:04:34 GMT
From: garym@alsys.com (Gary Morris @ignite)
Subject: Just say NO to RG58!

Is there a lower-loss alternative to RG-58 that is about the same diameter?

I'm planning to install a new mobile antenna for a UHF radio (1.2 Ghz) in my
car. 9913 would probably be too thick and too stiff for some of the places
it will have to go.

Any suggestions? Or does it matter with only a 10' coax run?
--GaryM

Date: 9 Nov 1994 15:29:06 GMT
From: n0dh@comtch.iea.com (D.C. Henderson)

Subject: Noise Question

DJ Wang (djwang@nmrsg.biophys.upenn.edu) wrote:
: In article <sdarragh-071194152136@sdarragh-mac.cisco.com>, sdarragh@cisco.com.3
(Scott Darragh) writes:
>: |> I am having terrible problem with noise. Let me explain:
>: |> 1. About every 5-10 seconds I get a 3-5 second "storm" of noise and it
>: |> completely blocks out signals from sending stations.

>: I have a similar problem. Except that the interval between noise
>bursts is about 1 minute.

Well guys it sounds like you live in the country and someone very close
to you has an electric fence charger to keep his live stock in bounds.
Get out the portable radio and start walking and driving around, If your
in the city could be some kind of flashing neon sign witha breakdown some
where.

Good Luck
"Been there...done that"
Dave
N0DH
Spoakne, WA

Date: Thu, 10 Nov 1994 14:33:47 GMT
From: gthorbur@ub.com
Subject: Noise Question

In article <sdarragh-071194152136@sdarragh-mac.cisco.com> sdarragh@cisco.com.3
(Scott Darragh) writes:
>I am having terrible problem with noise. Let me explain:
>
>1. About every 5-10 seconds I get a 3-5 second "storm" of noise and it
>completely blocks out signals from sending stations.
> . . .
>Scott

I hope Ed Hare at ARRL reads this and responds. But, sounds to me like
one of the following:

1) Electrical heating device: electr. blanket, heating pad, aquarium
    heater, thermostat on electric range, etc.

2) Defective power transformer (out on the utility pole)

3) Florescent lite with defective starter (check for a small florescent

unit, like a desk lamp, aquarium lamp, closet lamp.

Take a portable MW radio, and if you can hear it, walk around the house
or neighborhood sniffing for the source.

/***
Gary W. Thorburn gthorbur@ub.com KD1TE
***/

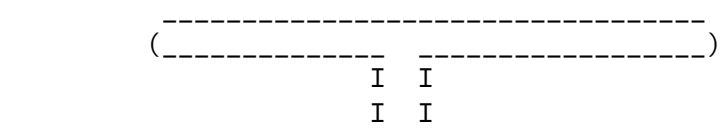
Date: 10 Nov 94 14:25:23 CST
From: rps@cray.com (Russell P. Starksen)
Subject: Phased slopers vs zep.

Russ rps@cray.com - N0MRR

Date: 10 Nov 1994 08:26:33 GMT
From: moritz@ipers1.e-technik.uni-stuttgart.de ()
Subject: Q: How make VHF (100 MHz) half-wave dipole?

>I have worked out that my required length for 100 MHz is 62 inches.
>(Wavelength = c / frequency, and adding 5 % for end effects.)

The easiest way should be to make a 300 Ohms folded dipole
from 300 Ohms cable:



Dont bother with copper tubing. The length will be about 90% of half wave,
roundabout 150 cm. Impedance is OK.

If this doesnt work well enough you will have to use an out door antenna.

Moritz

Date: 10 Nov 1994 14:59:43 GMT
From: dennisg@microware.com (Dennis Gabler)
Subject: Soliciting opinions on 160m loop

Hi Everybody,

I am considering putting up a 4 sided wire loop antenna on 160 meters. It will likely be no higher than 20', oriented horizontally. The side that will be fed will also probably be a little higher than the other three sides which will make it slope slightly to the north. My question is, is this a waste of time or does it sound workable?

Also, suggestions on how to feed this puppy will be greatly appreciated.

Thanks,
Dennis Gabler
--
Dennis Gabler   FF-1/EMT-D
dennisg@mcrware.com   KB5HVN/0

Date: Thu, 10 Nov 1994 09:13:22 MST
From: nx7u@primenet.com (Scott Townley)
Subject: test

-only a test-

Date: 10 Nov 1994 19:21:57 GMT
From: hubbard@convex.csd.uwm.edu (Terry Hubbard)
Subject: Towers As Radiators

In article <CywyF3.3xo@srgenprp.sr.hp.com> alanb@hpnmarb.sr.hp.com (Alan Bloom) writes:
>Bill Standerfer (bills@lvld.hp.com) wrote:
>: I'm about to put up a Rohn 20 tower which will be used as a vertical for 80M.
>: However, I've found no references that discuss the details of the base
>: structure,   ...
>: My current thought is to use a standard concrete base with a Rohn tilt base.
>: I expect to insulate the base and tower ...
>
>Rather than going to all the trouble to insulate the base, why not
>ground the base to a good radial system and connect the coax via a gamma
>match? You will need the radial system anyway to get good antenna
>efficiency, and the gamma match can be tuned to compensate the driving
>impedance if the antenna is not resonant.
>AL N1AL

[cut]

I have a 60 foot tower with a 7 element beam and 10 feet of mast
above that and have often thought about loading the tower up for

40 and 80 meters. The problem is that the tower is located about 6
feet out from the back of the house which prevents the installation
of a ground radial system or at least a symetrical one. Is there any
way of getting around this problem or what effect on efficiency and
radiation pattern would installing half of a ground system have.

Terry KF9HI

Date: 10 Nov 1994 07:35:09 -0500
From: jimn0oct@aol.com (JimN0OCT)
Subject: Twinax for feedline

In article <wa2iseCyw1AL.340@netcom.com>, wa2ise@netcom.com (Robert Casey)
writes:

about using twinax.

Gee, I would stick to using it for balanced applications. I've got some
taht will be used for portable operations. It is nice in that it has a
shield, but is lossier than 300 ohm tv twinlead or 450 ohm ladder line.
For portable QRP, I really don't care that much. It is neat stuff,
though, isn't it?

73, jim n0oct

Date: Fri, 11 Nov 1994 11:32:31
From: p.tyers@trl.oz.au (Peter Tyers)
Subject: Want quad-rebuild advice

In article <39tvof$ho4@news.halcyon.com> Mark Gaponoff <gaponoff@halcyon.com>
writes:
>From: Mark Gaponoff <gaponoff@halcyon.com>
>Subject: Want quad-rebuild advice
>Date: 10 Nov 1994 20:27:59 GMT

>I recently acquired the pieces of a Gem-Quad 3-band 2-element
>spider quad (20-15-10 meters).   It has all the parts except
>the feed-in balun and a few of the wire tubes/ties. One
>leg is broken in two near the midpoint. No wires.

>Questions:

- - - SNIP Questions deleted to save bandwidth - - - -

>Any advice would be appreciated. This is my first quad,
>so I am not sure (mercifully?) what I am getting into.
>Reply via email or post a reply on this thread.

I'd suggest that anyone considering doing anything with quads obtain a copy of the quad bible

      The Quad Antenna Handbook by William Orr (I think, or have I got him mixed up with the Beam Antenna Handbook?). If anyone wants exact references mail me and I'll post exact details Title, author ISBN etc.

Tells all about Quads in all their permutations including the care and feeding of multiband quads.

P Tyers, Tel. +61-(0)3-2536794   JANET: p.tyers%trl.oz.au@uk.ac.ucl.cs
ACSnet: p.tyers@trl.oz   UUCP:{uunet,hplabs,ukc}!munnari!trl.oz.au!p.tyers
CSnet: p.tyers@trl.oz.au   ARPAnet: p.tyers%trl.oz.au@uunet.uu.net HAM: VK3KTS
MAIL: Telecom Research Laboratories,P.O. Box 249,Clayton,VICTORIA 3168,AUSTRALIA

Date: Thu, 10 Nov 1994 09:24:59 MST
From: nx7u@primenet.com (Scott Townley)
Subject: WTB: Delta Elex OIB-1

Wanted To Buy: Delta Electronics OIB-1.
Needed for PhD Dissertation experiments.
Any retiring/retired broadcasters have one to spare?

Contact nx7u@primenet.com

Date: 10 Nov 1994 15:53 -0500
From: soderman@ewir-wr.UCSD.EDU (SODERMAN.WALTER)

References<7NOV199409094126@ewirb-wr> <ZW+XMgK.brunelli_pc@delphi.com>,
<1994Nov10.142911.21257@ke4zv.atl.ga.us>
Subject: Re: swr & xmission lines

In article <1994Nov10.142911.21257@ke4zv.atl.ga.us>, gary@ke4zv.atl.ga.us (Gary Coffman) writes...
>A 105 foot flattop section will work somewhat better. It avoids
>resonance on all the traditional HF bands so there's never an
>extremely high impedance at the feedpoint. The 135 footer will

>act like 2 halfwaves at 40 meters and, depending on feedline
>length, this can be hard to feed.
>
>Gary

What type of feedline have you tried with the 105 foot flattop?

Date: 9 Nov 1994 14:26:12 GMT
From: John Fleming <johnflem@mcs.com>

References<39lk39$bm6@News1.mcs.com> <39o1lg$2ml@News1.mcs.com>,
<jwitt.2.2EBF9AC4@pmeh-po.pmeh.uiowa.edu>
Subject: Re: Isotron w/ QRP

John,

How about tonite at 0100Z (7 PM for the Zulu-impaired)?
Iowa should be do-able! I'll listen for you, then call CQ!

72,
John N9NDH

> John Witt, N0WLY

End of Ham-Ant Digest V94 #374
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